CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER 92 - 129

CEASE AND DESIST ORDER FOR:

CHEMICAL & PIGMENT CO.
PITTSBURG, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Board, finds that:

Description of Discharger

1. The Chemical & Pigment Co., (hereinafter called the discharger) owns and operates a chemical manufacturing facility (hereinafter called the Facility), in the city of Pittsburg. The Facility manufactures chemical products for agricultural fertilizers and soil amendments. The products consists primarily of zinc based compounds with sulfate and chloride.

Location of Facility

2. The plant site is located in the City of Pittsburg in Contra Costa County at 600 Nichols Road. The plant is located about 800 feet north of the intersection of Nichols Road and Port Chicago Highway. The property westerly of the facility is owned by the U. S. Navy Weapons Station.

Impoundment Operation and Description

3. The discharger operates a surface impoundment located in the westerly corner of the Facility. In the past stormwater runoff, boiler blowdown, water softener solution, sodium hydroxide solution, and process drippings were discharged to the surface impoundment. The water in the impoundment is recycled back into the manufacturing process. Sludge in the impoundment was occasionally excavated and stored on site in bunkers for eventual recycling back into the process. The bunkers were also used to store raw materials and intermediate process materials.

4. Currently the impoundment is not receiving any waste discharge except rainfall and runon. The rainfall storm water are collected on top of a temporary plastic cover placed over the impoundment for minimizing percolation through the impoundment. Water collected in the impoundment is pumped to the process for plant use.

5. The impoundment dimensions near the top of the containment dike are about 150 ft in the east - west direction and 225 ft in the north - south direction. Near the bottom of the impoundment dimensions are about 100 ft east - west direction and 175 ft in the north - south direction.

Total depth is about 8.5 feet and the capacity of the impoundment is about 1.4 million gallons.

Waste Description

6. Title 22 of the California Code of Regulations defines wastes with zinc concentration in excess of 5,000 mg/kg as hazardous. Wastes stored and managed in the impoundment had or continues to have zinc concentrations as high as 110,000 mg/kg. This unit poses a threat to water quality. The state drinking water maximum contaminant level standard is 5.0 mg/L for zinc. The groundwater beneath the impoundment had or continues to have zinc concentrations up to 6,250 mg/L. The discharger believes that the high zinc contamination in groundwater was due to contaminated drill cuttings.

Waste Discharge Requirements

7. The Waste Discharge Requirement Order No. 87-074 was adopted on June 17, 1987 and governed the discharge to the surface impoundment.

8. The Cease and Desist Order No. 90-138 was adopted on October 17, 1990, and required the closure of the surface impoundment.

9. This Order requires additional investigations and provides time schedule for the implementation.

Impoundment Lithology

10. The discharger investigated the lithology in the vicinity of the impoundment to depths up to 54 feet below ground surface. Within the 54 feet depth, about four overlapping and interbedded strata can be identified as follows.

    a. Upper Silty Clay layer - This layer consists mostly of moist fill and native soil with occasional interbedded angular sand units. Its thickness varies from about 6 feet in the eastern area of the pond (vicinity of well v-4 and v-1) to about 23 feet east of monitoring wells v-3 and v-2. West of the monitoring wells v-3 and v-2, surface elevation is lower and the thickness of the layer is less.

    b. The Silty layer - This layer separates the upper and lower silty clay layers, and consists of moist native clayey silt with occasional wet sand lenses. Thickness varies from 17 feet northwest of the impoundment to 38 feet in the southwest and 42 feet in the western area of the impoundment. Groundwater was encountered in wells installed during the 1987 hydrogeological investigation. Wells installed through this layer in January 1992 did not encounter appreciable quantities of groundwater. This drop in groundwater level may be attributed to absence of significant rainfall in recent years.

    c. Lower Silty Clay Layer - The layer consist of mostly moist silty clay with occasional interbedded wet sandy and silty units. Thickness is about 20 feet northwest of the impoundment and 11 feet east of the impoundment. Groundwater was encountered in monitoring wells installed through this layer in January 1992.

    d. The Lower Sand Layer - This layer is directly below the lower silty clay layer and consists of saturated fine sand with some silty and clayey sands. The thickness

penetrated in this layer ranges from 5 feet in monitoring well M2R northeast of the impoundment to 10 feet in monitoring well M3R west of the impoundment.

Groundwater Units

11. During the October 1987 hydrogeological investigation, groundwater was encountered in shallow monitoring wells at depths 24 feet to 34 feet below ground surface. The groundwater is thought to come from the discontinuous sand lenses in the upper silty clay and silty layers. In January, 1992 additional wells were installed. Groundwater was not encountered between 24 feet and 34 feet depths in these new wells except in monitoring well M6. The absence of saturated uppermost layer may be due to low rainfall in recent years and may suggest that the uppermost layer groundwater is seasonal. CPC believes that the presence of shallow groundwater may have been due to a leaking water line which has been repaired by CPC. The groundwater is believed to be flowing west across the impoundment.

12. Lower Sand Zone - Monitoring wells installed the December 1987 investigation and January 1992 well replacement program indicated that the lower sand groundwater is encountered at depths between 40 feet and 45 feet below ground surface. The groundwater is thought to come from the sandy lenses of the lower silty clay layer and the saturated lower sand layer. The potentiometric surface of groundwater is about 31 feet below ground surface and direction of flow is northeasterly across the impoundment.

13. Deep Sand Unit - This unit is penetrated by the discharger's only water supply well (WSW) which was abandoned in 1991. The well was drilled to a 100 feet total depth and completed through many saturated layers from about 25 feet to 100 feet below ground surface. Well crossections from the hydrogeological assessment report indicates that a saturated deep sand unit exists from about 65 feet below ground surface. The extent and thickness of this saturated unit is not known as a result of insufficient information.

14. The lower sand zone and the uppermost groundwater zone may be in hydraulic communication. The Discharger proposes to continue to monitor groundwater levels in these zones.

Soil Contamination

15. Zinc has been identified as the primary soil contaminant, other detected contaminant includes lead, cadmium and copper. In the various investigations conducted at the site, contaminant concentrations were reported as follows:

    a. The December 1987 hydrogeological assessment report indicates that zinc concentrations in soil samples taken from soil boring were as much as 59,800 mg/kg at 10 feet below ground surface and about 16,800 mg/kg at 30 feet below ground surface. Analysis and preparation of soil samples were performed using EPA methods 7950/3050.

    b. The results of impoundment soil sampling presented in the November 20,1990 report, indicates zinc concentrations as much 49,000 mg/kg at about a foot below ground surface and as much as 16,000 mg/kg at about 5 feet below ground surface. Analysis and preparation of soil samples were performed using EPA method 6010/200.7.

c. Soluble concentrations of contaminants were determined for some of the soil samples obtained from the November 20, 1990 impoundment sampling. Several were above their respective soluble threshold limit concentrations (STLC). The California waste extraction method was used for extraction. Analysis and preparation of extract were performed using EPA method 6010/200.7. Result of this analysis indicates a zinc soluble concentration as high as 300 mg/L (STLC is 250 mg/L), cadmium concentration as high as 4.9 mg/L (STLC is 1 mg/L), lead concentration as high 620 mg/L (STLC is 5 mg/L) and copper soluble concentration as high as 44 mg/L (STLC is 25 mg/L.

Groundwater Contamination

16. The December 1987 hydrogeological assessment report indicates that zinc concentrations in groundwater samples taken from monitoring wells were as high as 6,250 mg/L. The discharger has indicated that the high concentration may be the result of groundwater contamination from drill cuttings. Other contaminants were detected in the groundwater samples at concentrations as high as 0.62 mg/L for lead and 0.66 mg/L cadmium. Analysis of groundwater samples were performed using EPA methods 289.1, 213.1, 239.1 for zinc, cadmium and lead, respectively.

17. Groundwater samples were collected from the new monitoring wells installed in January 1992. A March 4, 1992 report entitled "Current Analytical Results on our Monitoring System" indicates zinc concentrations as high as 1800 mg/L. Copper concentration were as high as 240 mg/L. Analysis of groundwater samples were performed using EPA methods 7950 and 7210 for zinc and copper respectively.

18. Quarterly groundwater analyses report, indicate groundwater zinc concentrations as high as 64 mg/L.

Groundwater Monitoring System

19. Monitoring wells existing before January 1992, includes M1, M2, M3, M4, M5, V1, V2, V3, V4 and the water supply well. The wells with "V" designation are the vadose or shallow wells while the wells with "M" designation are the deep wells. Due to inadequate well construction involving completion across multiple zones, monitoring well M2, and M3 were grouted and abandoned. Monitoring well V4 was accidentally damaged and was also grouted and abandoned. In January 1992 monitoring wells M2R, M6, M3R, V5, V6,and V4R were installed as replacements for abandoned wells and to enhance the monitoring system.

Cease Discharge Requirement

20. The discharger covered the impoundment with a 10 mil polyethylene liner and 30 mil hypalon cover over the outside face of the impoundment dike to fulfill the cease discharge requirement of the Toxic Pits Cleanup Act (TPCA). Rain water is collected on top of the liner and then pumped to the process for facility use. The Facility must maintain the liner because wear and tear on the liner may create a condition for infiltration of rain water. Infiltrated water may mobilize contaminants in the soil and violates the cease discharge requirement of the TPCA.

Technical Reports (Closure Plan)

21. The discharger submitted a May 21, 1990 report entitled "Preliminary Closure/Post Closure

Monitoring Plan for the Surface Impoundment". The plan considers six soil remedial alternatives and identifies work needed to plan, design and construct closure of the pond. The plan however did not include any ground water remedial action plans.

22. A second February 12, 1991 report entitled "Closure Plan for Surface Impoundment" proposed to cover the impoundment with a 40 mil liner and reuse the impoundment for collection of rain water. The plan does not protect the ground water bodies in the vicinity of the impoundment from the hazardous concentration of contaminants in the impoundment's soil.

23. The May 1992, "Revised Facility Closure Plan" proposes to close the impoundment as a landfill. Engineered alternative to Chapter 15 prescriptive standard was considered. The plan's proposal for protection of groundwater may be insufficient. More information is needed to determine what hydraulic and physical containment is applicable.

Investigation Required

24. The discharger is conducting further investigation to obtain information on the depth of soil contamination beneath the impoundment and a description of lithology beneath the impoundment.

25. Soil samples collected near the impoundment but within the discharger's property continues to indicate elevated concentrations of contaminants. There is the possibility that contamination may exceed the facility's boundaries.

26. Suisun Bay is about 3/4 mile from the site and the nearby Bay marsh is known to be contaminated with inorganic chemicals including zinc. The discharger's site and stockpiled zinc contaminated soil may be contributing to the contamination through site runoff.

Applicable Regulations

27. The TPCA applies to the surface impoundment pursuant to Sections 25208.4(b), 25208.1 and 25208.6 of the Health and Safety Code (HSC).

28. The TPCA prohibits discharge to hazardous waste surface impoundments after June 30, 1988, if the impoundment is within one half-mile of a potential source of drinking water [Section 25208.4(a) of the (HSC)]. The discharger's impoundment is within one-half mile of a potential source of drinking water.

29. In the event that the discharger decides to close the impoundment as a waste management unit the Provisions of Chapter 15 shall apply.

Reference to Regulation

30. All references to Chapter 15 in this Order refers to Chapter 15, Division 3, Title 23 of the California Code of Regulations.

Basin Plan

31. The Board revised the Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986 and amended it on August 19, 1987, on July 18, 1989 and on December

11, 1991 which contains water quality objectives. This Order implements the water quality objectives of the Basin Plan.

Beneficial Uses of Surface and Groundwater

32. The beneficial uses of Suisun Bay in the vicinity of the site are:

a. Contact and non-contact water recreation;
b. Fish migration and spawning;
c. Wild life and estuarine habitat;
d. Preservation of Rare and endangered species;
e. Industrial process supply;
f. Contact and non contact recreation;
g. Estuarine habitat;
h. Navigation; and,
i. Commercial and sport fishing.

33. The potential beneficial uses of the groundwater underlying the site are:

a. Municipal water supply and service supply; and,
b. Agricultural supply.

California Environmental Quality Act

34. This action is an Order to enforce the laws and regulations administered by the Regional Board. This action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321, Title 14, California Code of Regulations.

Notice and Meeting

35. The Board notified the discharger and interested agencies and persons of its intent under the California Water Code Section 13301 to consider the adoption of a Cease and Desist Order for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

36. The Board, in a public hearing, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13301 of the California Water Code that Chemical and Pigment Co. and any other person that owns the land or operates the facility, shall cease discharge at the TPCA regulated impoundment, and comply with the provisions of this Order as follows:

A. Prohibitions

1. The operation of this facility shall not create a condition of pollution or nuisance as defined in Sections 13050 (l) and (m), of the California Water Code.

2. The discharge of wastes or hazardous material in a manner which will degrade the water quality or adversely affect the beneficial use of the waters of the state of California is prohibited

3. Discharge of hazardous wastes to the surface impoundment before or after closure is specifically prohibited

4. Further significant migration of pollutants through subsurface transport to the waters of the State is prohibited.

5. The discharge of contaminated groundwater onto land, into surface water or groundwaters is prohibited, unless permitted by an authorized agency.

B. Specifications

1. The impoundment shall be closed according to the task and schedule in the provisions and in manner acceptable to the Executive Officer.

2. Until the impoundment is closed according to the task and schedule of this Order, the impoundment shall be covered to prevent incident rainfall from percolating into the wastes and accumulating rainfall shall be removed from the impoundment. The impoundment may be uncovered for work related to closure.

3. The discharger shall remediate and abate further ground water contamination, which actually or threatens to degrade water quality or adversely affect the beneficial uses of the waters of the State.

4. The discharger shall conduct groundwater monitoring of the impoundment and other contaminated areas in accordance with the Self Monitoring Program attached to this Order.

C. Provisions

The discharger shall Comply with the specifications and provisions of this order in according to the following tasks and time schedule:

1. The discharger shall submit a technical report acceptable to Executive officer, proposing a plan for investigation of the extent of soil and ground water contamination outside the impoundment.
Report Due: No later than December 21, 1992.

2. The discharger shall submit a technical report acceptable to the Executive Officer containing the results of the soil and ground water investigation outside the impoundment.
Report Due: No later than March 12, 1993.

3. The discharger shall submit a technical report acceptable to the Executive Officer, including but not limited to a storm water management plan, a plan to manage the zinc contaminated soil stockpile south of the office building and a plan to investigate the potential offsite transport of contaminants
Report Due: No later than March 12, 1993.

4. The discharger shall submit a technical report acceptable to the Executive Officer including the design and construction methods for the proposed closure alternative and

any post closure use construction within the perimeters of the impoundment.

5. The discharger shall submit a technical report, acceptable to the Executive Officer documenting closure or completion of necessary tasks related to closure. The report shall include but not be limited to certification of construction methods and materials used.

6. Reports pursuant to compliance with the prohibitions, specifications, or provisions of this Order shall be prepared under the supervision of a registered civil engineer or certified engineering geologist.

7. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance and quality control records for Board review.

8. The discharger shall maintain in good working order, and operate as efficiently as possible, any facility or control system installed to achieve compliance with the requirement of this Order.

9. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, submitted by the Discharger, shall also be provided to the following agencies:

    a. Contra Costa County Health Department; and,
    b. California Environmental Protection Agency, Department of Toxic Substances Control.

10. The discharger shall file with this Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries, contours, or ownership of the disposal areas.

11. The discharger shall maintain a copy of this Order at the site so as to be available at all times to site operating personnel.

12. The Board considers the property owner and discharger to have continuing responsibility for correcting any problems within their reasonable control which arises in the future as a result of this waste discharge or water applied to this property during subsequent use of the land for other purposes.

13. The discharger shall comply with any amendments to the self monitoring program as directed by the Executive Officer.

14. The discharger shall permit the Board or its authorized representative, in accordance with Section 13267 (a) of the California Water Code, the following:

    a. Entry upon premises on which wastes and impoundment are presently or previously located or in which any required records are kept;

b. Access to copy of any records required to be kept under terms and conditions of this Order;

c. Inspection of monitoring equipment or methodology implemented in response to this Order; and,

d. Sampling of any discharge, groundwater and soil.

15. The requirements do not authorize commission of any act causing injury to the property of another or of the public, do not convey any property rights, do not remove liability under federal, state or local laws, and do not authorize the discharge of waste without appropriate federal, state, or local permits, authorizations, or determinations.

16. If any hazardous substance or extracted groundwater is discharged in or on any waters of the state, or discharged and deposited, or probably will be discharged in or on any waters of the state, the Discharger shall

a. Report such discharge to the following:

(i) This Regional Board at (510) 464-1255 on weekdays during office hours from 8 a.m. to 5 p.m.; and,

(ii) The Office of Emergency Services at (800) 852-7550.

b. A written report shall be filed with the Regional Board within five working days and shall contain information relative to the following:

(i) The nature of waste or pollutant;
(ii) The quantity involved and the duration of incident;
(iii) The cause of spill;
(iv) The estimated size of affected area;
(v) The corrective measures that have been taken or planned, and a schedule of these measures; and,
(vi) The persons/agencies notified.

17. Technical reports submitted by the discharger, in compliance with the Prohibitions, Specifications, and Provisions of this Order shall be submitted according to the schedule specified herein. These reports shall consist of a letter report that includes the following:

a. A summary of the work completed since submittal of the previous report and work projected to be completed by the time of next report;

b. Identification of any obstacles that may threaten compliance with the schedule of this Order and what actions are being taken to overcome these obstacles;

c. In the event of non compliance with any Prohibition, Specification or Provision of this Order, written notification which clarifies the reasons for non-compliance and proposes specific measures and a schedule to achieve compliance. This written notification shall identify work not completed that was projected for

completion, and shall identify the impact of non compliance on achieving compliance with the remaining requirements of this order; and,

d. In the first self monitoring report, an evaluation of the current groundwater monitoring system and a proposal for modifications as appropriate.

18. The Board will review this Order periodically and may revise the requirements when necessary.

19. If the Discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the Discharger shall promptly notify the Executive Officer and the Board shall consider revision to this Order.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 21, 1992

STEVEN R. RITCHIE
Executive Officer

Attachments:

Figure 1 - Site Location
Figure 2 - General Facility Layout
Self Monitoring Program.

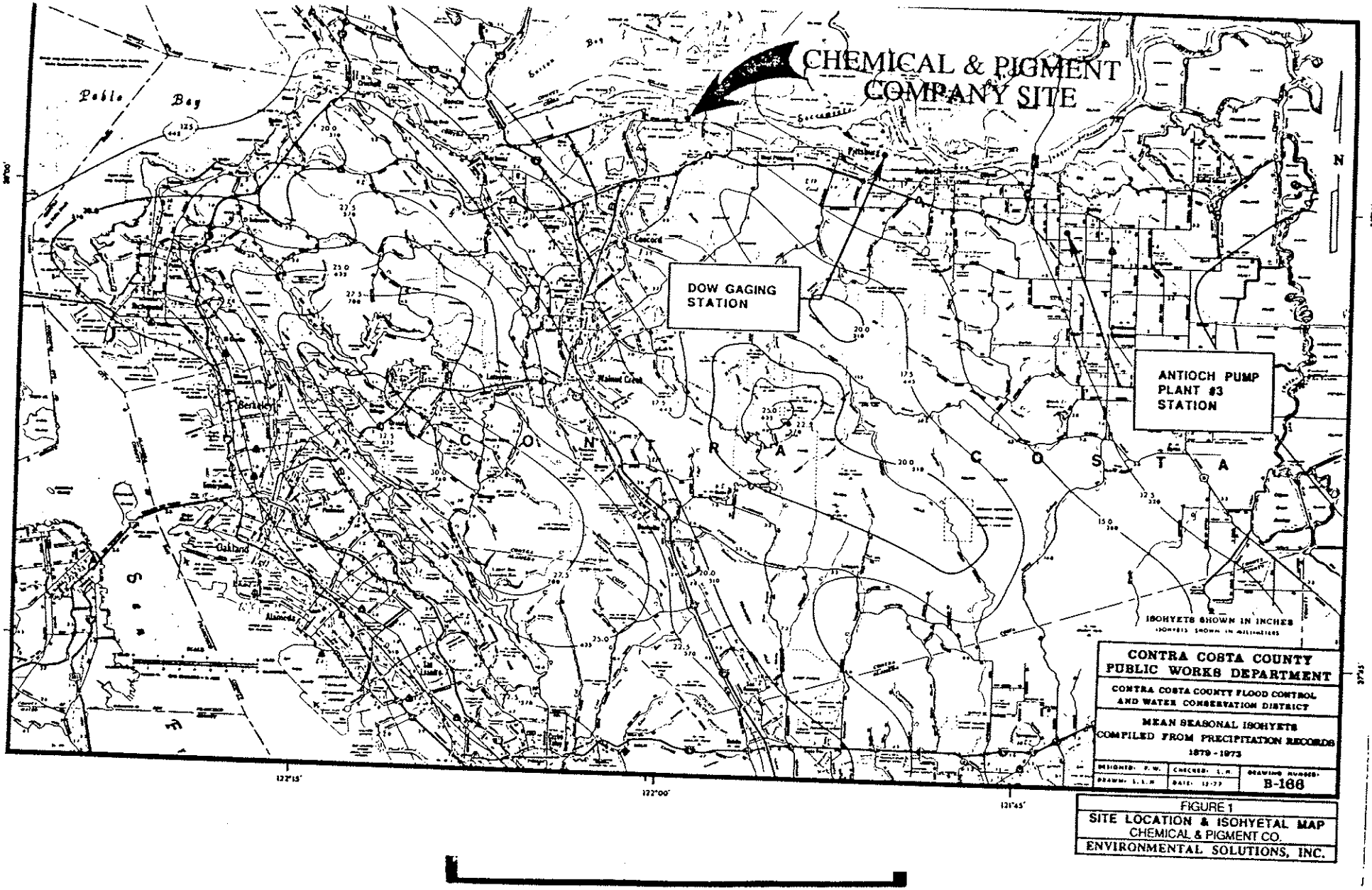
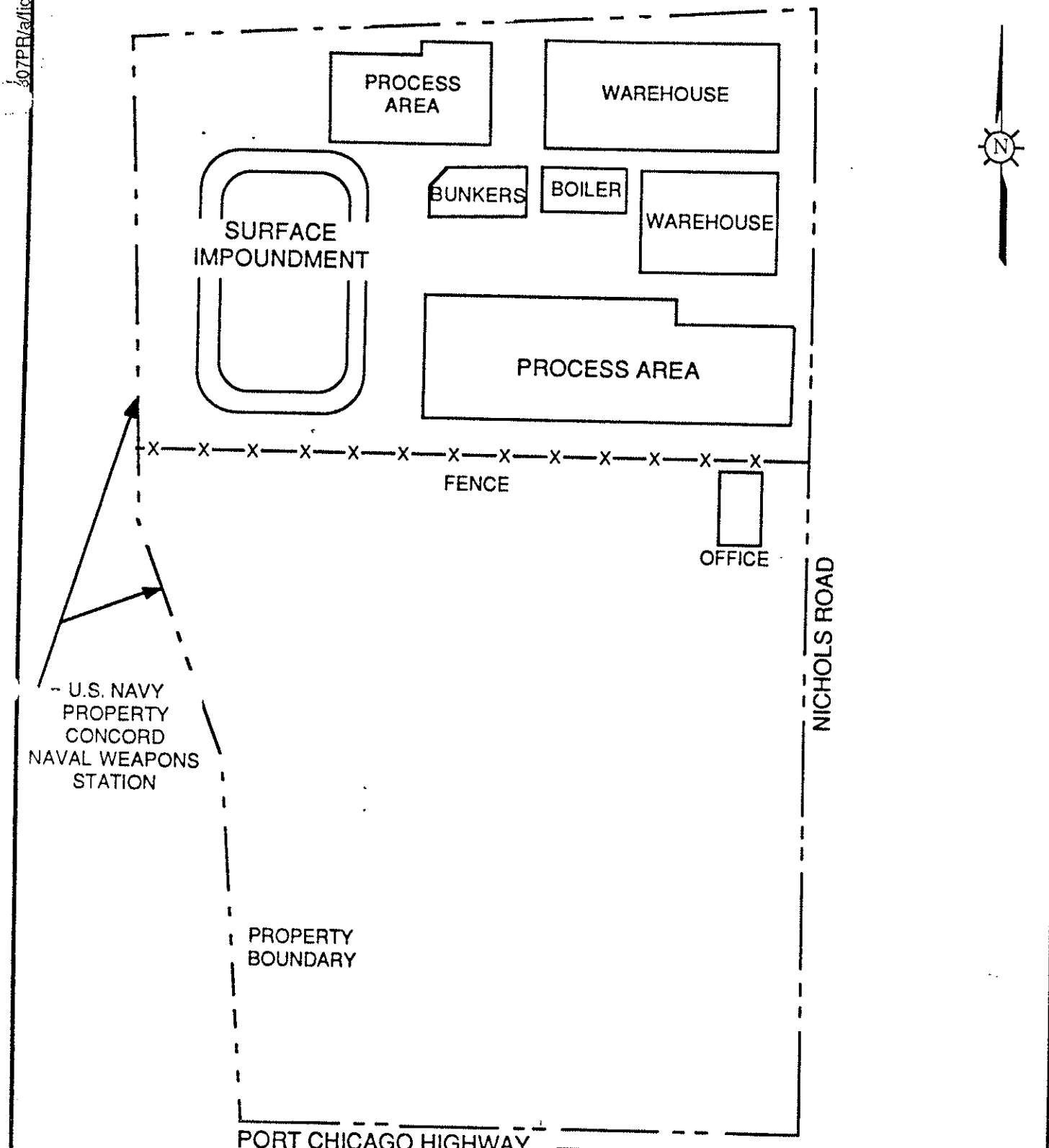


FIGURE 1
SITE LOCATION & ISOHYETAL MAP
CHEMICAL & PIGMENT CO.
ENVIRONMENTAL SOLUTIONS, INC.



NOTE:

THIS DRAWING SHOWS THE RELATIVE FACILITY LAYOUT. LOCATIONS OF VARIOUS FACILITIES ARE APPROXIMATE AND SHOULD NOT BE SCALED.

FIGURE 2

GENERAL FACILITY LAYOUT - RELATIVE LOCATION OF IMPOUNDMENT

CHEMICAL AND PIGMENT COMPANY

ENVIRONMENTAL SOLUTIONS, INC.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CHEMICAL & PIGMENT CO.

600 NICHOLS ROAD, PITTSBURG, CALIFORNIA, 94565

CLASS I SURFACE IMPOUNDMENT.

Pittsburg, CONTRA COSTA COUNTY

CEASE AND DESIST ORDER NO 92 - 129

CONSISTS OF

PART A

AND

PART B

PART A

A. General

1. Reporting responsibilities of waste dischargers are specified in Sections 13225 (a), 13267 (b), 13383, and 13387 (b) of the California Water Code and this Regional Board's Resolution No. 73-16.

2. The principal purposes of a self-monitoring program by a waste discharger are the following:

   a. To document compliance with waste discharge requirements and prohibitions established by the Board;

   b. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge;

   c. To develop or assist in the development of effluent standards of performance, pretreatment and toxicity standards, and other standards; and,

   d. To prepare water and wastewater quality inventories.

B. Sampling and Analytical Methods

1. Sample collection, storage, and analyses shall be performed according to the most recent version of Standard Methods for the Analysis of Wastewater, and Test Methods for Evaluating Solid Waste EPA Document SW-846, or other EPA approved methods and in accordance with an approved sampling and analysis plan. Soil sampling shall be by Waste Extraction Technique (WET) or other standard methods submitted for approval.

2. Water and waste analysis except total suspended solids (TDS) shall be performed by a laboratory approved for these analyses by the State Department of Health. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted this Regional Board.

3. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. Definition of Terms

1. A grab sample is a discrete sample collected at any time.

2. Duly authorized representative is either a named individual or any individual occupying a named position such as the following:

   a. Authorization is made in writing by a principal executive officer; or,

b. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as general partner in a partnership, sole proprietorship, the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company.

D. Schedule of Sampling, Analysis, and Observations

1. The discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B, and the requirements in Subchapter 15.

2. A statistical analysis shall be performed and reported annually as described in Article 5 of Chapter 15.

E. Records to be Maintained by the Discharger

1. Written reports shall be maintained by the discharger for ground water monitoring and wastewater sampling, and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

a. Identity of sample and sample station number;
b. Date and time of sampling;
c. Method of composite sampling (see Section C-Definition of Terms);
d. Date and time that analyses are started and completed, and the name of the personnel performing the analyses;
e. Complete procedure used, including the method of preserving the sample, and the identity and volumes of reagents used (A reference to a specific section of a reference required in Part A Section B is satisfactory);
f. Calculation of results;
g. Results of analyses, and detection limits for each analyses; and,
h. Chain of custody forms for each sample.

F. Reports to be Filed with the Board

1. The report period shall be done on a calendar quarterly basis. For quarterly ground water monitoring reports, written reports shall be filed regularly each quarter within forty-five days from the end of the quarter monitored. In addition an annual report shall be filed as indicated in section F.1.g. The fourth quarterly report may be attached as an appendix to the annual report. The reports shall include the following:

a. Letter of Transmittal - A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations, such as, operation and/or facilities modifications. If the discharger has previously submitted a detailed time schedule for correcting requirements violations, a reference to the

correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president of his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement of the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct. The letter shall contain the following certification:

"I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible of gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

b. Summary Sheet - Each monitoring report shall include a compliance evaluation summary sheet. Until the Order's amended to specify groundwater protection standards, the following shall apply and the compliance sheet shall contain:

   i. The method and time of water level measurement; the type of pump used for purging, pump placement in the well, method of purging, pumping rate; equipment and methods used to monitor field pH, temperature, turbidity, and conductivity during purging; calibration of the field equipment, results of the pH, temperature, turbidity, and conductivity testing; well recovery time, and method of disposing of the purge water; and,

   ii. Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations; and, the chain of custody record.

c. A summary of the status of any remedial work performed during that quarter. This shall be a brief and concise summary of the work initiated and completed as follows:

   i. As interim corrective action measures; and,

   ii. To define the extent and rate of migrations of waste constituents in the soil and ground water at the site.

d. The discharger shall describe, in the quarterly report, the reasons for significant

increases in a pollutant concentration at a ground water monitoring well. The description shall include the following:

i. The source of the increase;

ii. How the discharger determined or will investigate the source of the increase; and,

iii. What source removal measures have been completed or will be proposed.

e. On a semi-annual basis, a map or aerial photograph showing observation and monitoring station locations, and plume contours (if any) for each chemical in each aquifer shall be included as part of the quarterly Report.

f. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board. The following information shall be provided:

i. The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review; and,

ii. In addition to the results of the analyses, laboratory quality control/quality assurance (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 90%; the results of equipment and method blanks; the results of spiked and surrogate samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.

g. By January 31 of each year the discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:

i. Tabular and graphical summaries of the monitoring data obtained during the previous year;

ii. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements; and,

iii. A written summary of the ground water analyses indicating any change in the quality of the ground water.

G. In the event the discharger violates or threatens to violate the conditions of the waste discharge requirements and prohibitions or experiences a leachate generation due to:

1. Maintenance work or breakdown of waste containment facility or;
2. Accidents caused by human error or negligence, or;
3. Other causes, such as acts of nature.

The discharger shall notify the Regional Board office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within 7 working days of the telephone notification. The written report shall include time and date, duration and estimated volume of leachate generated, method used in estimating volume and person notified of the incident. The report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

In addition, the waste discharger shall promptly accelerate his monitoring program to analyze the discharge at least once every day. Such daily analyses shall continue until such time as the leachate generation has ceased, the effluent limits have been attained, until bypassing stops or until such time as the Executive Officer determines to be appropriate. The results of such monitoring shall be included in the regular Quarterly Report.

Part B

A. Description of Observation Stations and Schedule of Observations

1. The observation stations shall consist of the existing ground water monitoring wells M1, M4, M5, V1, V2, V3, M2R, M6, M3R, V5, V6, V4R and additional monitoring system that may be installed in the future.

2. The schedule of observations and grab sampling shall be quarterly and shall be conducted within the months of January, April, July and October.

B. Observations and Test Procedures

1. The observations shall consist of the following:

   a. Water elevation reported to the nearest 0.1 inch for both depth to water from the ground surface and the elevation of the ground water level;

   b. Ground water temperature measured at the time of sampling and reported in degrees Fahrenheit;

   c. Ground water conductivity measured at the time of sampling as per Standard Methods 205 using potentiometric methodology;

   d. Ground water pH measured at the time of sampling as per Standard Methods 423 using potentiometric methodology; and,

   e. Ground water turbidity measured at the time of sampling.

2. The test procedures for the ground water and soil samples shall consist of the following:

   a. Soil and Groundwater analysis for zinc, copper and lead shall be performed using EPA methods numbers 7950, 7210 and 7421 respectively and / or the most current revised methods approved by EPA.

   b. In the event of increased pollutant concentration in the ground water samples, revised monitoring program proposal to assure adequate definition of the extent of contamination of pollutants in groundwater wells shall be submitted along with test results.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program is as follows:

1. Developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 92 - ;

2. Effective on the date shown below; and,

3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the discharger.

Steven R. Ritchie
Executive Officer

October 21, 1992
Date Ordered